ABSTRACT

OPTIMIZATION OF THE DETERMINATION OF SEPTONEX IN PHARMACEUTICAL PREPARATIONS BY CAPILLARY ZONE ELECTROPHORESIS WITH USE OF ORGANIC SOLVENTS AS ADDITIVES IN THE BACKGROUND ELECTROLYTE

A new method of capillary zone electrophoresis with contactless conductivity detection for the determination of septonex in pharmaceutical preparations was devised. Optimal conditions for the separation and determination of septonex were: background electrolyte 30mM MES of pH 7.0 (adjusted with 200mM TRIS) containing 12.5mg/ml of (2-hydroxypropyl)-β-cyclodextrin and 20% (volume), voltage 25kV, temperature 25°C and sample injection for 6 seconds under the pressure of 50mbar. Arginin (200µg/ml) was used as internal standard. The peak of septonex was satisfactorily separated from the peak of internal standard as well as from the EOF. The analysis was carried out in a fused-silica capillary (internal diameter 50µm, total length 75cm and the length to the detector 45cm). The separation took less than 5 minutes and the overall analysis time involving appropriate rinsing of the capillary was less than 13 minutes. The calibration curve was linear in the range 75µg/ml - 400µg/ml of septonex, correlation coefficient r = 0.9997. The LOD was 13,5µg/ml and LOQ was 45µg/ml of septonex. The method is applicable for qualitative as well as for quantitative assay of septonex in pharmaceutical preparations.